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Attitudes and Management Preferences of Anglers Fishing for Brook Trout, *Salvelinus fontinalis*, on the Avalon Peninsula, Newfoundland and Labrador, Canada

Robert C. Perry, Donald G. Keefe, and Wendy Penney

Department of Environment and Conservation
Wildlife Division
P.O. Box 2007
Corner Brook NL A2H 7S1

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Canada

Foreword

This series documents the scientific basis for the evaluation of aquatic resources and ecosystems in Canada. As such, it addresses the issues of the day in the time frames required and the documents it contains are not intended as definitive statements on the subjects addressed but rather as progress reports on ongoing investigations.

Research documents are produced in the official language in which they are provided to the Secretariat.

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ABSTRACT

This study was undertaken to determine angler attitudes and management preferences for fishing brook trout, *Salvelinus fontinalis*, on the Avalon Peninsula of Newfoundland and Labrador. It was conducted in response to concerns brought forward by a local conservation group, the Salmonid Association of Eastern Newfoundland (SAEN), who alleged that brook trout stocks on the Avalon Peninsula had declined in quality and that the angling community wanted changes to the current brook trout regulations in the area. Results indicated that although anglers feel that the fishery has declined over time, it does not warrant a change to the current angling regulations. The majority of respondents (69 %) were satisfied with the current regulations, while 70 % disagreed with any bag limit reductions. Furthermore, responses to motivational questions indicated that non-catch related activities were more important than catch related activities. Written comments indicate that anglers attribute the fisheries decline to inadequate enforcement and not to inappropriate regulations. Due to a lack of public interest, we recommend that there should be no attempt to modify regulations for the Avalon Peninsula.

Attitudes et préférences en matière de gestion des pêcheurs d'omble de fontaine, *Salvelinus fontinalis*, sur la presqu'île Avalon, Terre-Neuve-et-Labrador, Canada

RÉSUMÉ

La présente étude visait à déterminer les attitudes et préférences en matière de gestion des pêcheurs d'omble de fontaine, *Salvelinus fontinalis*, sur la presqu'île Avalon, à Terre-Neuve-et-Labrador. Elle a été entreprise en réponse aux préoccupations exprimées par un groupe de conservation local, la Salmonid Association of Eastern Newfoundland (SAEN), qui affirmait que la qualité des stocks d'omble de fontaine de la presqu'île Avalon a baissé et que la communauté de pêcheurs voulait faire apporter des modifications aux règlements actuels visant l'omble de fontaine dans la région. Les résultats ont montré que même si les pêcheurs pensent que la pêche a décliné au fil du temps, une modification du règlement de pêche actuel n'est pas nécessaire. La majorité des répondants (69 %) sont satisfaits du règlement actuel, mais 70 % sont opposés à toute réduction de la limite de prises. En outre, les réponses aux questions sur la motivation indiquent que les activités non liées aux prises sont plus importantes que celles qui y sont liées. Il ressort des commentaires écrits que les pêcheurs attribuent le déclin des pêches à une mauvaise application de la loi plutôt qu'à une réglementation inappropriée. Compte tenu du manque d'intérêt du public, nous recommandons de ne pas modifier le règlement concernant la presqu'île Avalon.

INTRODUCTION

In 2007 a survey was conducted to access angler's attitudes and management preferences for fishing brook trout on the Avalon Peninsula, Newfoundland and Labrador, Canada. The survey was conducted in response to concerns brought forward by a local conservation group, the SAEN, who alleged that brook trout, *Salvelinus fontinalis*, stocks on the Avalon Peninsula had declined in quality and that the angling community wanted changes to the current brook trout regulations in this area. The information gathered from the survey was to guide the decisions making process pertaining to regulative amendments in the event that the alleged decline was substantiated. The following report outlines the survey methodology and findings.

Across Canada there is a general decline in recreational fishing participation (DFO 2005). Declines in recreational fishing have been attributed to many factors including, changing values, loss in rural culture and a general collapse in recreational fisheries (Duda et al. 2004; Post et al. 2002; Johnson and Carpenter 1994). This drop in participation has made it imperative for recreational fisheries managers to better understand the motivations that drive people to fish and what influences their enjoyment while angling (Fedler and Ditton 1994). It is hoped, that understanding these motivations, will enable managers to make management decisions that enhance the angling experience, thereby creating an environment that will encourage new anglers and reengage those that are lapsed. Early studies determined that motivations for anglers fishing were diverse. Anglers cannot be thought of as one large group but should be thought of as a collection of subgroups based on their differing motivations (Fedler and Ditton 1994). Often motivational subgroups are directly associated with population demographics such as age and income (Hudgins 1984).

It has been suggested that anglers fish for four principle factors: temporary escape, achievement, experiencing natural settings and exploration (Knopf et al. 1973). These four components can be placed into two categories; catch related and non-catch related motivations (Fedler and Ditton 1986). Catch related motivations involve the actual experience of catching and possessing fish while non-catch involves the experience surrounding the act of fishing. Listed as possible catch related motivations are the frequency and size of the catch. The non-catch related motivations involve stress reduction, spending time with loved ones, and enjoying nature. An angler's compliance to any fisheries regulations will be greatest if the regulative change reflects angler's attitudes and motivations (Reynard and Hilborn 1986). To this end, motivation studies provide insight into what anglers seek in a fishing experience (Fedler and Ditton 1994) and have direct application to the formulation of fishery management strategies (Schoolmaster and Frazier 1985).

STUDY AREA

The total land area for the Avalon Peninsula is approximately 10, 360 km^2 (GIS layer extraction of National Topographic Services Data, NTS, 1:50,000 scale). In 2007 the Avalon Peninsula was home to approximately 246,400 people (Newfoundland and Labrador, Rural Secretariat). This accounts for approximately 49 % of Newfoundland and Labrador's total population. The Avalon Peninsula appears to have an ageing population. In the 1990's the populations mean age was 31. By 2010 the mean age rose to 41 years. In general the geographic distribution of the residents is shifting from the smaller rural towns towards the larger urban centers of the north east portion of the peninsula (Newfoundland and Labrador, Rural Secretariat). In total,

98 randomly chosen communities which surround the perimeter of the Peninsula were involved in the survey (Fig. 1).

METHODOLOGY

SURVEY DEVELOPMENT

Initially, a literature review was undertaken to determine an effective way to format and phrase survey questions. The review also helped in establishing key components to include in the survey. Consultations were held within the Aquatics Group of the provincial Wildlife Division to identify the key information required. During this process, previous questionnaires developed by the Aquatics Group were reviewed. Recommendations or problems from these surveys were also noted. Subsequently, the questionnaire was formatted in three sections which consisted of motivation, management, and demographic sections.

The motivational section involved determining "why anglers fish". Usually motivational questions can be divided into two sub categories; catch and non-catch related motivations. Catch related motivations involve the act of catching and retaining fish while non-catch related motivations include the environment and events that surround the fishing act (Moeller and Engelken 1972; Hendee 1974). Listed as possible catch related motivations are the frequency by which fish are caught and the size of the fish caught. The non-catch related motivations include relaxing, spending time with family and friends, and enjoying nature (Driver and Knopf 1976).

The management section contained questions that were designed to assess angler opinion regarding the quality of the brook trout fishery on the Avalon Peninsula. In the event that anglers indicated a concern, additional questions were asked to determine whether anglers were in favor of regulative change and to determine what regulations they would tolerate in the event that change was required. Each survey also included a comment section to ascertain opinions among anglers not addressed by the survey questions (Appendix A).

Demographic questions were reserved for the final section of the questionnaire. They were designed to profile the local angling population based on their age, sex, place of residence, involvement with conservation groups, and their commitment to fishing.

Special attention was given to reduce response bias in the questionnaire. This was achieved by ensuring questions were positively phrased and were not worded in a bias nor ambiguous fashion (Sheskin 1985). Likewise, the agree-disagree statements and importance rankings were divided into equal numbers to ensure a balanced set of choices for respondents. It was also decided that respondents would be given an even number, point scale system to choose from, so that respondents would be forced to make either a positive or negative choice, rather than a neutral choice (Nunnally 1957). Questions were ranked using a 6 point scale.

Upon completion of the preliminary questionnaire it was submitted to Dr. Lawrence F. Felt, from the Department of Sociology at Memorial University, who has expertise in the implementation of surveys relating to resource management and Mr. Peter Bull, from the Public Involvement Section of the Colorado Division of Wildlife, were asked to review the draft and offer critique. Both reviewers ensured the phrasings of questions were written as to assure respondents would not misinterpret or answer incorrectly.

Subsequent to the completion of the editorial process, a pilot study was conducted to test the revised draft questionnaire (Sheskin 1985). Draft copies were given to 15 individuals. Responses and comments from each individual were compiled in summary form, and reviewed by the Aquatics Group. Questions that respondents found unclear were examined and either corrected or omitted in the final draft. Additionally, because the survey was in mail-out form, a cover letter was written which gave a brief introductory statement explaining the purpose of the study and the importance of the survey pertaining to management for the area (Appendix A). Responses from the study did not require names or addresses and were grouped together with all respondents. Complete anonymity was guaranteed to ensure identities and responses would be kept confidential.

SAMPLE SIZE AND ACQUIRING PARTICIPANTS

The Avalon Peninsula is home to approximately 246,400 people. To obtain an accurate depiction of the entire population the recommended number of respondents was estimated at 384 (Sheskin 1985). As the province does not have a licensing system for trout fishing, to acquire participants for the survey we randomly drew names from the provincial small game licensing system, housed within the Department of Environment and Conservations', Wildlife Division. Previous studies have revealed that the majority of small game hunters also take part in the recreational trout fishery (Duwors et al. 1999). In total, 1400 households were randomly chosen to receive questionnaires, all of which were found in communities surrounding the Avalon Peninsula.

ANALYSIS

To determine order of preference among the catch and non-catch motivational responses we used an Analysis of Variance (ANOVA). If a statistically significant difference was identified, Sheiffe's multiple comparison procedure was used to determine where the difference occurred (Sokal and Rohlf 2000). To identify significant differences in frequencies between survey responses, Chi square tests were used (Sokal and Rohlf 2000). To perform the Chi square analysis, responses were converted so that they could be weighted equally. For all questions where anglers were asked to choose their responses based on a scale of 1-6 the original scale was re-weighted to give equal value to ranks 1-3, when being compared to values 4-6. By converting the rankings in this manner it allowed us to categorize people into groups based on answers to the survey questions and allowed for meaningful statistical comparisons, for example:

Strongly disagree					**Strongly agree**	
1	**2**	**3**	**4**	**5**	**6**	(original rank)
3	**2**	**1**	**1**	**2**	**3**	(weighted rank)

Additionally, we could use the weighted ranking to generate a strength score whereby we could evaluate the vehemence of an interviewees held opinion. Collectively this allowed us to gage local anglers' emotional responses. The strength score was generated by summing each questions scores then dividing the total into each portion of scores that fell on both the lower and upper side of the rankings. When comparing anglers' responses regarding the quality of the fishery, five verses ten years in the past a paired T-test was used. This allowed respondents

responses to be compared at the individual level. All statistical tests were deemed significant at $\alpha = 0.05$.

RESULTS

The questionnaire along with cover letter was mailed to participants on March 4th, 2008 with a postage paid return envelope. In total 1335 surveys were mailed. 509 (38 %) questionnaires were returned by anglers. Although 1400 surveys were printed, at the point of mailing, only 1335 surveys were sent due to administration error. Additionally 29 did not reach their destination because the people had either moved, were deceased or there was an address error. In total, participants came from 98 communities surrounding the Avalon Peninsula (Fig. 1). Each respondent's survey was given an individual serial number to allow the questionnaire to be cross-referenced at a later date. A summary of each person's comments was also compiled.

MOTIVATIONAL SECTION RESPONSES

In accordance with our results non-catch related motivations were more important to anglers then catch related motivations ($F = 1858.99$, $P < 0.001$, $df = 1$) (Fig. 2). The pair-wise comparison (Scheffes post hoc test) revealed that "spending time with family and friends", "enjoying a wilderness setting", and "relaxing in a natural environment" ranked higher in importance than "keeping few fish and releasing the rest", "catching the daily limit of trout", and "catching at least one trophy fish". However, of the catch related motivations, anglers still rank highest importance to "keeping few fish and releasing the rest" (68 % of respondents) ($X2 = 68.042$, $P < 0.001$, $N = 503$) (Fig. 3), while 59 % of respondents felt that "catching the daily limit of trout" was not important ($X2 = 17.059$, $P < 0.001$, $N = 507$) (Fig. 4). Additionally, "catching at least one trophy fish" was also deemed as not being important (78 % of respondents) ($X^2 = 156.358$, $P < 0.001$, $N = 505$) (Fig. 5).

MANAGEMENT SECTION RESPONSES

When asked what importance anglers placed on *"releasing everything they catch"* or "*keeping everything they catch"*, in both instances anglers significantly gave little importance to either statements (80 % of respondents gave little importance to *"releasing everything they catch"*, $X^2 = 184.940$, $P < 0.001$, $N = 503$; 82 % of respondents gave little importance to "*keeping everything they catch"*, $X^2 = 206.543$, $P < 0.001$, $N = 502$) (Figs. 6 and Fig. 7). Strong importance was given to the statement which gave an option of "*keeping some fish and releasing the rest"* (68 % gave it high importance, $X^2 = 68.042$, $P < 0.001$, $N = 503$) (Fig. 3).

The majority of anglers (53 %) reported "not *catching the bag limit very often*" ($X^2 = 1.556$, $P < 0.001$, $N = 504$) (Fig. 8) and a larger majority (63 %) disagreed with the statement that "*trout stocks on the Avalon were as healthy as they ever were"* ($X^2 = 34.253$, $P < 0.001$, $N = 501$) (Fig. 9). Additionally, when anglers who had fished the Avalon Peninsula for longer than a ten year period were asked how they felt about the quality of fishing 5 years ago and 10 years ago their rankings indicated that the quality of fishing was much better ten years ago when compared to five years (Paired t-test; $t = -16.367$, $P < 0.001$, $n = 488$ pairs) (Figs. 10 and Fig. 11).

Although anglers felt the quality of fishing on the Avalon had declined, the majority indicated that the fishing was still very good (64 % gave it a positive rating: $X^2 = 37.936$, $P < 0.001$, N = 502) (Fig. 12). Despite the perceived decline in fishing quality, the majority of respondents (70 %) did not want bag limit reductions ($X^2 = 83.549$, $P < 0.001$, N = 503) (Fig. 13). When respondents were asked specifically what they thought would be an acceptable daily bag limit of the options presented 51 % chose 12 trout, while 11 % chose more than 12, 23 % preferred 10-12 fish and only 1 % chose 1-3 trout per day.

The majority (69 %) of anglers also reported being satisfied with the current regulations ($X^2 = 70.406$, $P < 0.001$, N = 502) (Fig. 14). The only statement regarding regulative changes that anglers supported was that the Avalon Peninsula should be placed into a separate management zone from the rest of the island (64 % agreed with the statement, $X^2 = 38.088$, $P < 0.001$, N = 502) (Fig. 15).

When asked how many times anglers were approached by officers, 55 % reported having never been approached by a fisheries officer, while 25 % had only been approached once or twice. The majority of fisherpersons (84 %) wanted more input into the management decisions for the Avalon ($X^2 = 234.794$, $P <0.001$, N = 504) (Fig. 16).

DEMOGRAPHIC SECTION RESPONSES

The mean age of anglers represented in this survey was 52 (born 1956), the oldest respondent was 85 and the youngest was 18. The mean reported years fished on the Avalon Peninsula by anglers were 37. Of the 509 respondents to the mail out survey, 95 % did not belong to a conservation or outdoor group.

During the summer of 2007, 30 % of the anglers surveyed spent 20 days or more trout fishing, 28 % spent 10 days or more, while only 4 % said they did not fish for trout. In the winter season of 2007, 35 % of anglers surveyed reported fishing 1-5 days and 10 % reported spending 20 or more day's ice fishing. In total, 51 people took the time to fill additional comments in the space provided, the vast majority of which provided alternative suggestions for management. The prevailing concern was a lack of fisheries enforcement with 35 % of the comments addressing this point, specifically.

DISCUSSION

The survey results indicate that anglers fishing the Avalon Peninsula do feel that the quality of their fishery has declined through time. However, the decline does not appear to be large enough to invoke a response whereby anglers want a management change. The majority of respondents indicated they were satisfied with a bag limit that was near or unadjusted from the current limit (51 % chose 12 trout, 11 % wanted more than 12, 23 % would like 10-12 trout). Furthermore, 69 % indicated they were satisfied with the current regulations while 70 % disagreed with any bag limit reductions.

The response to the motivational questions provides a profile of anglers whose enjoyment of the angling experience is driven more by aesthetics rather than by the quantity of their harvest. They significantly gave higher rankings for motivations which involved fishing with friends and family, enjoying nature, and relaxation when compared with catch related motivations. This finding is consistent with others who found similar ranks for catch and non-catch related motivations (Holland 1985; Falk et al. 1989; Schramm and Dennis 1993; Siemer and Brown

1994). It is noteworthy that, 82 % of respondents gave little importance to keeping everything they catch. Conversely a large number of respondents (80 %) also gave little importance to releasing everything they catch. Therefore, the Avalon Peninsula sport fishing community appears to be neither extreme conservationists nor utilitarian in exploitation of the resource. However, it does appear that the respondents are moderates. For example, while catching the limit was not of great importance, having the opportunity to catch and keep a few fish to eat was significant, with 68 % indicating its importance.

It is possible that the public view regarding regulative change is less important than the perceived lack of an enforcement presence. Survey results indicated that 55 % reported having never been approached by a fisheries officer, while 25 % had only been approached once or twice. This is further supported by the majority of written comments which addressed enforcement related issues. This lack of interaction with officers is particularly poignant when placed in the context that the average age of our respondents was 52 and the average reported time fishing the Avalon was 37 years.

The concern initially brought forward by the conservation group (SAEN), that the Avalon Peninsula angling community perceived a decline in fishing quality and therefore wanted changes to the current regulations, was only partially supported by our survey results. While anglers did perceive a decline in the quality of the fishery, we found no indication they thought it warranted changing the current regulations. The results of this survey indicated that the majority of anglers (95 %) did not belong to a conservation or outdoor group and therefore their opinions may differ from those of the conservation group. Given our findings, it is probable that anglers perceived the decline in fishing quality is more attributable to a lack of enforcement rather than inappropriate regulations.

RECOMMENDATIONS

1) As there does not appear to be a general interest for changes to the management regulations. There should be no attempt to modify the current regulations for the Avalon Peninsula.

2) It appears the angling community attributes the decline in fishing quality to a lack of infield enforcement. The reported low average of encounters with officers in the field, coupled with the large average of angling years fished suggests the concern may be justified. Therefore, their concerns should be brought to the Federal Department of Fisheries and Oceans and the Provincial Department of Natural Resources.

ACKNOWLEDGMENTS

A special thanks to Avalon Peninsula residents that took the time to participate in the angling social survey. We would also like to thank Amanda Ledrew for data entry and collation of the surveys as well as Larry Felt and Peter Bull for reviewing the social survey design.

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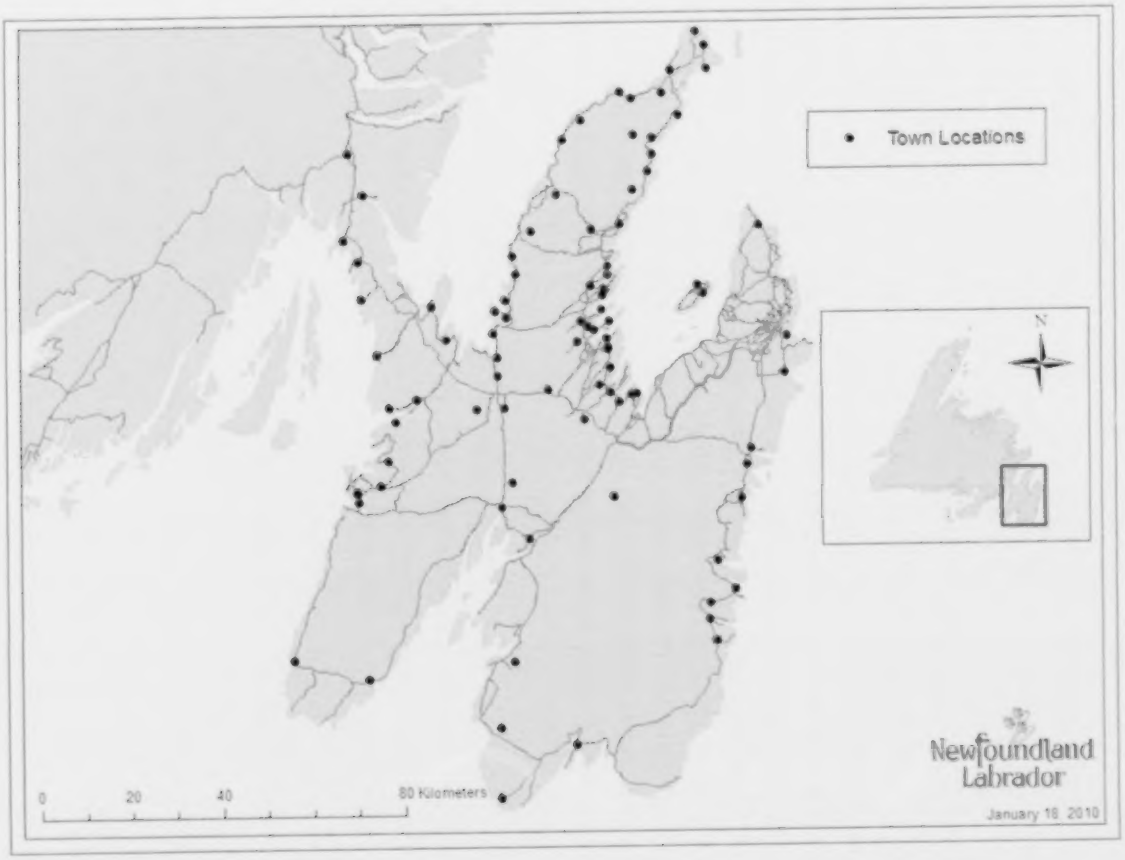

Figure 1. Map showing 98 randomly chosen communities which received the Avalon Peninsula trout management social survey.

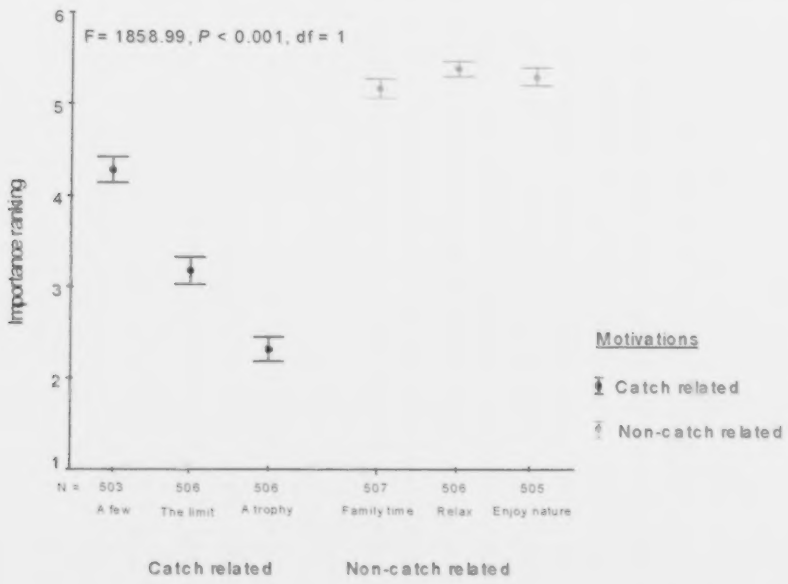

Figure 2. Responses by anglers fishing the Avalon Peninsula to catch and non-catch related motivations using mean rankings. Catch related motivations: A few = How important is it to you to keep a few fish and release the rest?; The limit = How important is it that you catch your daily limit of trout?; A trophy = During a fishing trip, how important is it that you catch at least one trophy (large fish) fish?; Family time = How important is it for you to use fishing as an opportunity to spend time with family and friends?; Relax = How important is it that you relax in a natural environment regardless of the quality of fishing?; Enjoy nature = How important is it for you to get away from work and enjoy a wilderness setting regardless of the quality of fishing?

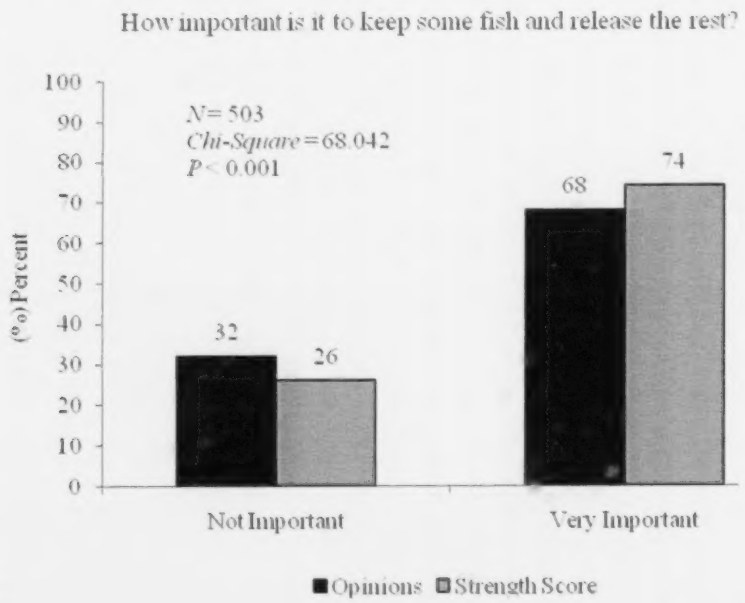

Figure 3. Statement presented to anglers during Avalon Peninsula social survey.

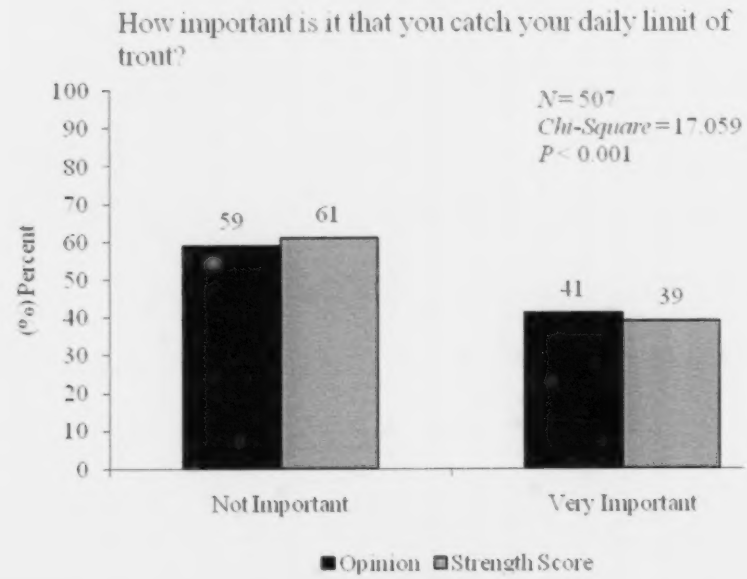

Figure 4. Statement presented to anglers during Avalon Peninsula social survey.

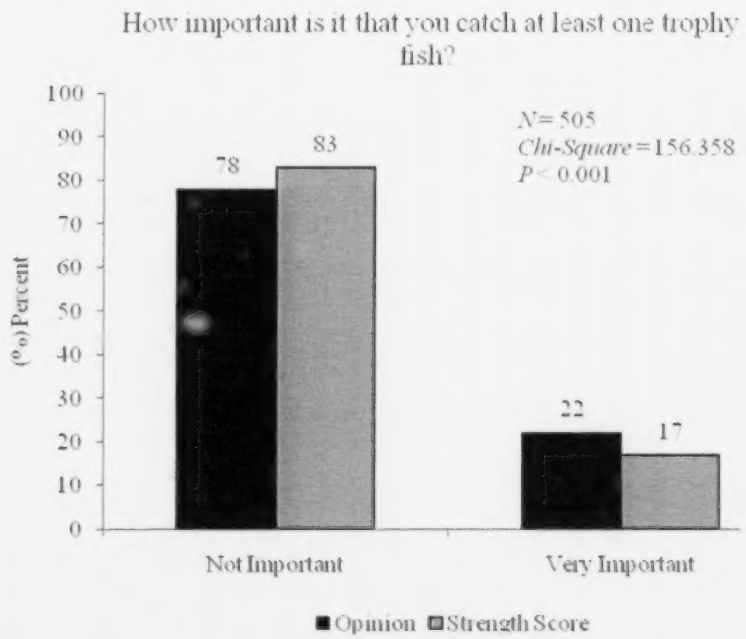

Figure 5. Statement presented to anglers during Avalon Peninsula social survey.

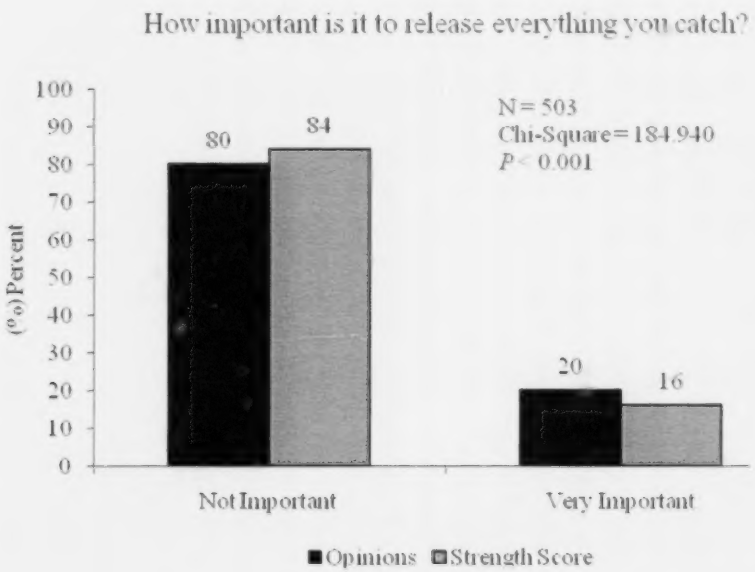

Figure 6. Statement presented to anglers during Avalon Peninsula social survey.

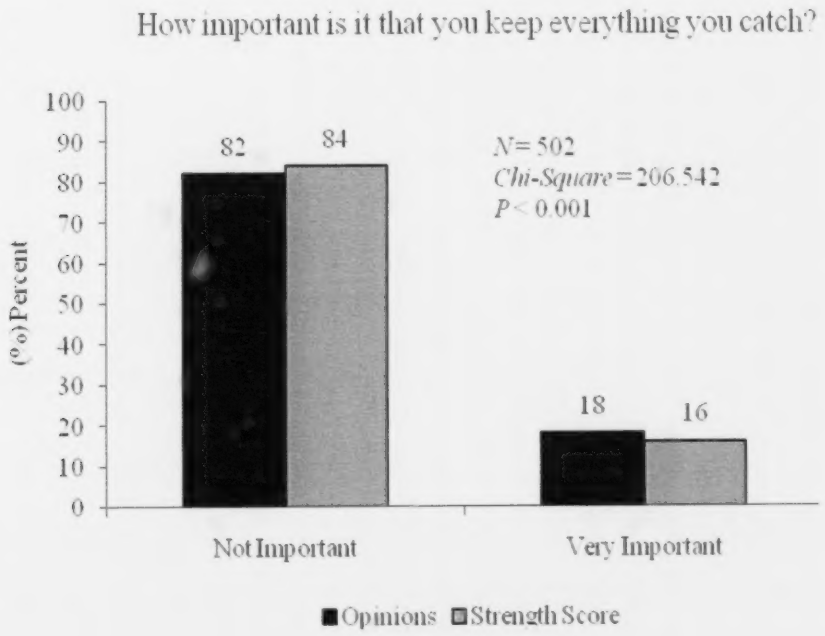

Figure 7. Statement presented to anglers during Avalon Peninsula social survey.

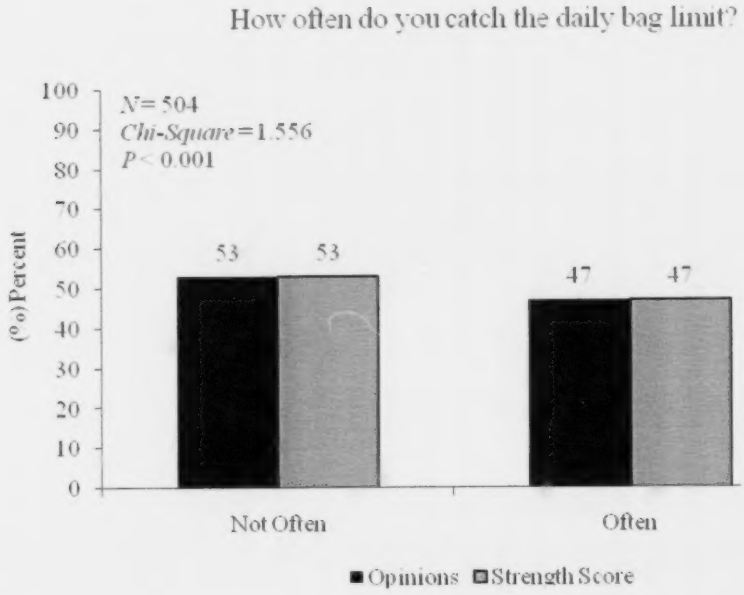

Figure 8. Statement presented to anglers during Avalon Peninsula social survey.

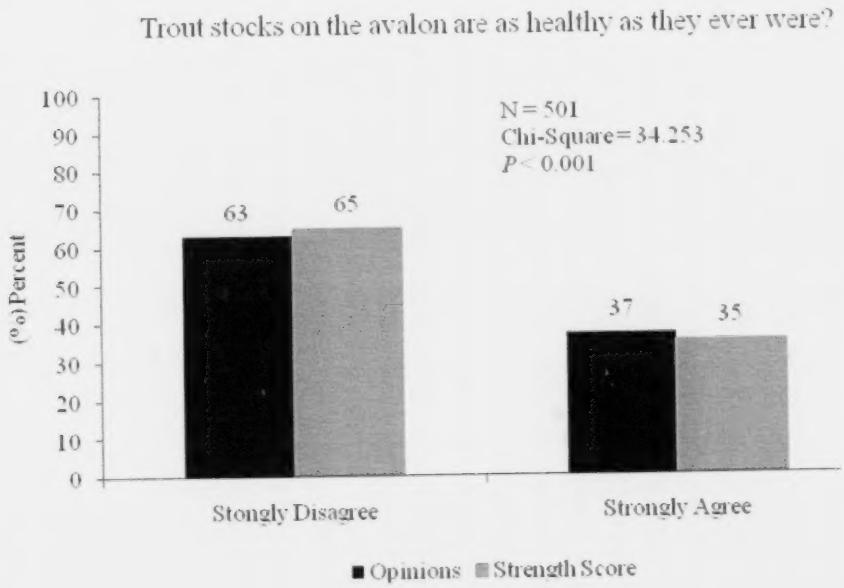

Figure 9. Statement presented to anglers during Avalon Peninsula social survey.

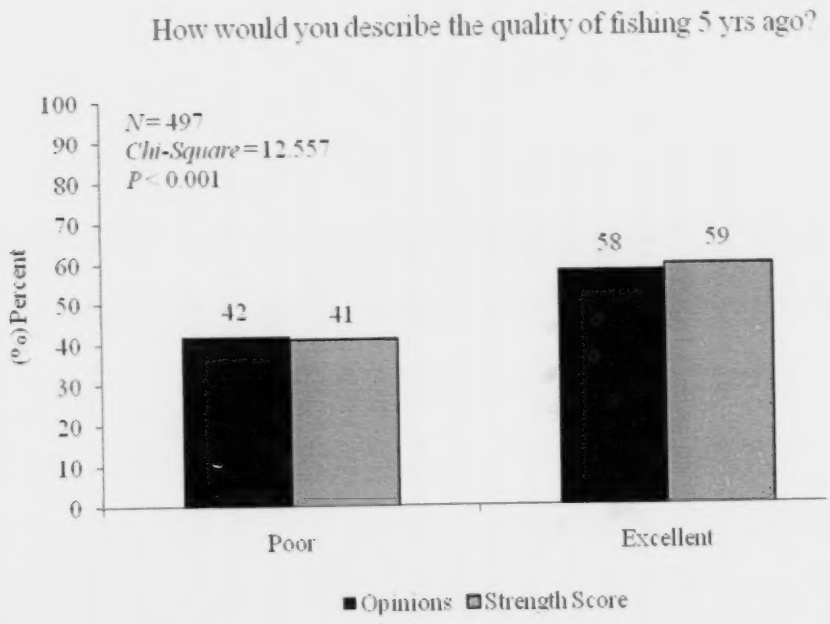

Figure 10. Statement presented to anglers during Avalon Peninsula social survey.

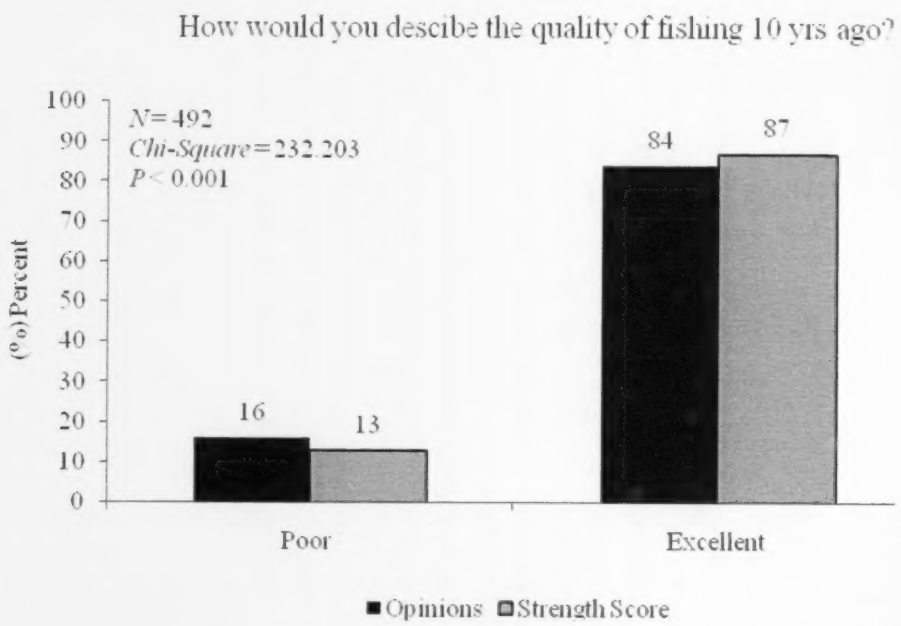

Figure 11. Statement presented to anglers during Avalon Peninsula social survey.

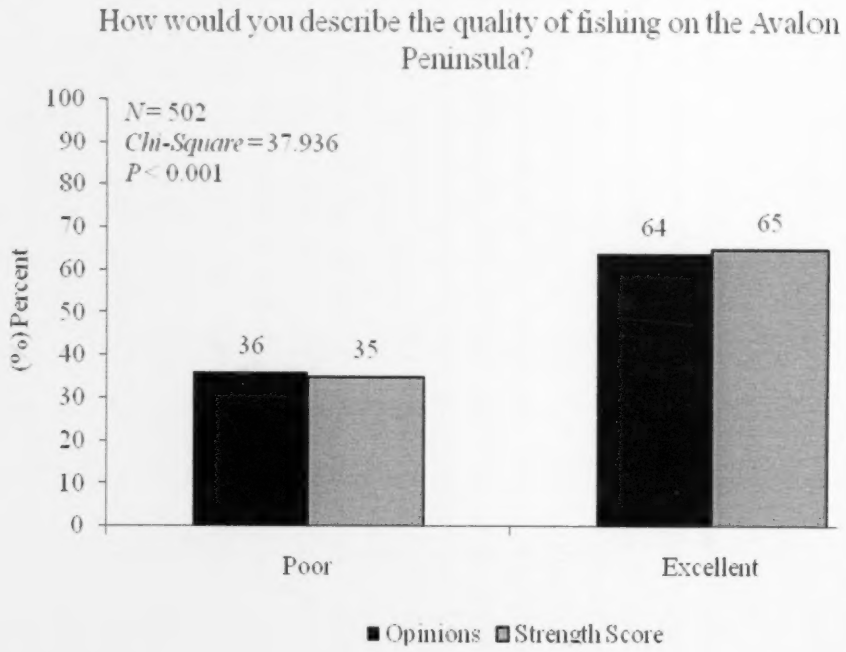

Figure 12. Statement presented to anglers during Avalon Peninsula social survey.

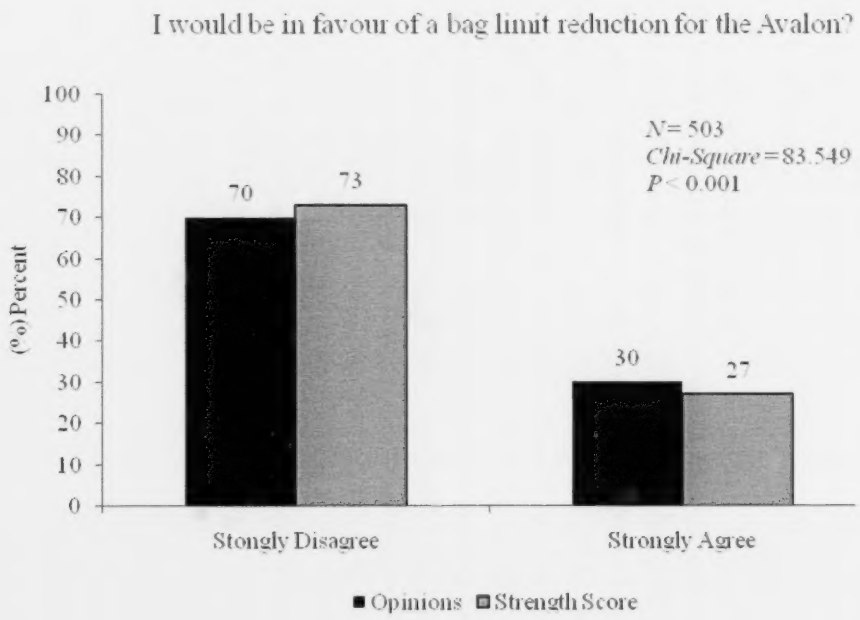

Figure 13. Statement presented to anglers during Avalon Peninsula social survey.

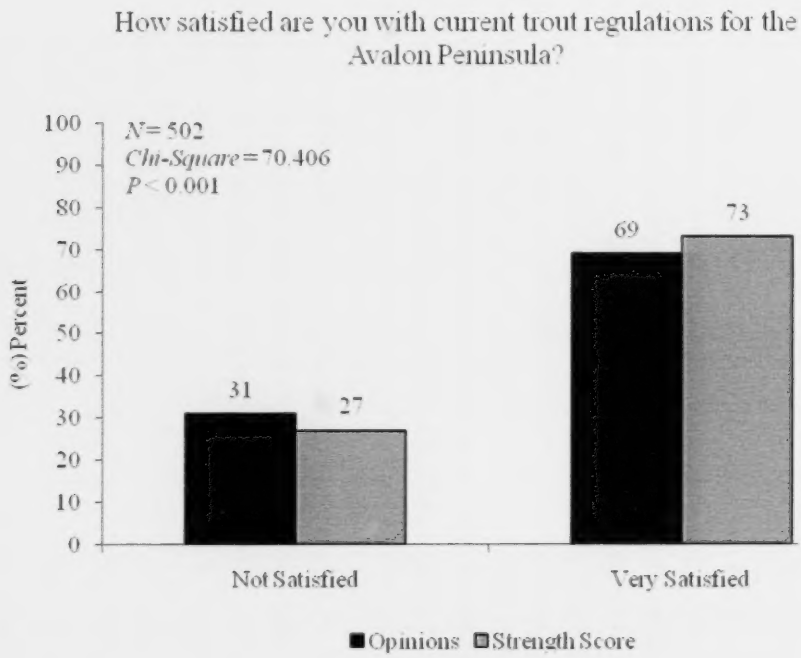

Figure 14. Statement presented to anglers during Avalon Peninsula social survey.

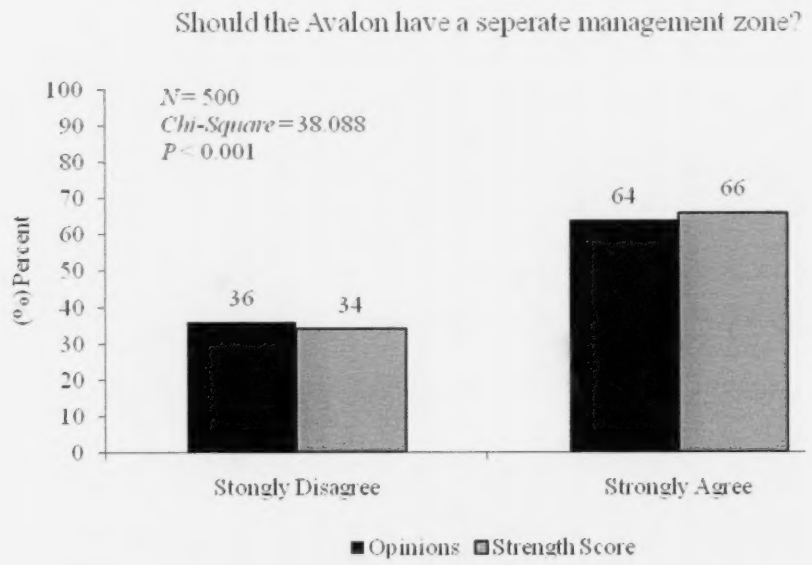

Figure 15. Statement presented to anglers during Avalon Peninsula social survey.

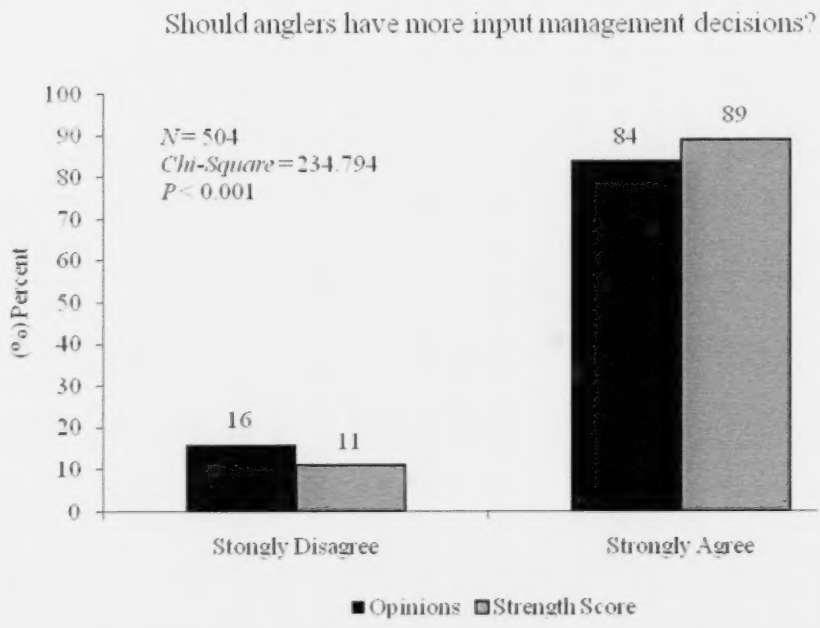

Figure 16. Statement presented to anglers during Avalon Peninsula social survey.

APPENDIX A

Newfoundland Labrador

Government of Newfoundland and Labrador

Department of Environment and Conservation

Dear small game hunter,

Your name and mailing information has been obtained through our provincial small game license returns system. As a licensed small game hunter we have learned through other studies that there is a good probability that you also enjoy recreational fishing.

If this is the case, the Aquatics Group within the Newfoundland and Labrador Wildlife Division is hoping you will help us in getting angler opinions on the brook trout (*Salvelinus fontinalis*) fishery of the Avalon Peninsula. In particular we are interested in what motivates you, as an angler, to go fishing and how you feel about the current regulations for the brook trout fishery. What we learn from the information you provide will guide us when making recommendations to the Federal Department of Fisheries and Oceans.

We have kept the study questions purposefully short so that we do not take up to much of your time. Responses for this study do not require your name, nor address and will be grouped with all other respondents. In this way, anonymity will be assured, and individual responses will be kept confidential.

The hardcopy information gathered from this study will be stored in our files for a period of two years and then destroyed.

To return your completed survey, simply place it in the postage paid, self addressed envelope for return to the Wildlife Division. If you do not participate in the brook trout fishery, please disregard this survey or pass it along to someone you know who does fish for trout on the Avalon. We wish to thank-you for your assistance and wish you the best of luck in all your outdoor hunting and fishing activities.

If you have any questions in regards to this survey please do not hesitate to contact us at (709) 637-2023 or mail us a letter using the address provided at the bottom of this page. Thanks again for your help in aiding us in the conservation of this valuable resource.

Sincerely,

Robert Perry

Senior Aquatics Species Biologist

Wildlife Division

P.O. Box 2007, Corner Brook, NL, Canada A2H 7S1 Telephone 709.637.2023 Fax 709.637.2036

Date (dd/mm/yy): _____

AVALON PENINSULA TROUT MANAGEMENT A SOCIAL SURVEY

Using the 6 point scale, rank the following statements based on there importance to you when fishing on the Avalon Peninsula. (1 being not important and 6 very important)

1. *How important is it that you catch your daily limit of trout?*
   1 2 3 4 5 6
2. *During a fishing trip, how important is it that you catch at least one trophy (large fish) fish?*
   1 2 3 4 5 6
3. *How important is it that you catch trout to eat?*
   1 2 3 4 5 6
4. *How important is it that you relax in a natural environment regardless of the quality of fishing?*
   1 2 3 4 5 6
5. *How important is it for you to use fishing as an opportunity to spend time with family and friends?*
   1 2 3 4 5 6
6. *How important is it for you to get away from work and enjoy a wilderness setting regardless of the quality of fishing?*
   1 2 3 4 5 6
7. *How important is it that you keep everything you catch?*
   1 2 3 4 5 6
8. *How important is it to you to keep a few fish and release the rest?*
   1 2 3 4 5 6
9. How important is it to you that you release everything you catch?
   1 2 3 4 5 6
10. *How many times did you fish for trout on the Avalon Peninsula during 2007? (Circle the appropriate number of days fished during winter and/or summer below.)*

    Winter (Ice fishing)
    0 1-5 6-10 10 or more 20 or more

    Summer
    0 1-5 6-10 10 or more 20 or more

The current daily bag limit for trout on the Avalon Peninsula is 12 or 5lbs

11. *What do you think is an acceptable daily bag limit? (Circle One)*
    1–3 trout 4–6 trout 7–9 trout 10-12 trout 12 trout more than 12 trout

12. *Do you fish for trout in other areas of the province?* Yes ☐ No ☐

    If yes, do the other areas seem to have healthier fisheries? Yes ☐ No ☐

13. *How long have you been fishing for trout on the Avalon Peninsula?* _____

Since you began fishing trout on the Avalon Peninsula, how would you describe the quality of fishing? Rank the quality of fishing using the 6 point scale (1 being poor and 6 being excellent) in accordance with the following time intervals.

5 years ago	**1**	**2**	**3**	**4**	**5**	**6**
10 years ago	**1**	**2**	**3**	**4**	**5**	**6**

ANGLER'S PREFERENCES AND OPINIONS ON MANAGEMENT

Using the 6 point scale, rank the following statements and questions based on your own experiences.

1. How often do you catch the daily bag limit?

Less often — Very often

1 2 3 4 5 6

2. During the time you fished for trout on the Avalon Peninsula, how many times have you been approached by a fisheries officer?

0 1 2 3 4 5 more than 5

3. Trout stocks on the Avalon Peninsula are as healthy as they ever were.

Strongly disagree — Strongly agree

1 2 3 4 5 6

4. Should the Avalon Peninsula have a separate management zone to monitor trout stocks?

Strongly disagree — Strongly agree

1 2 3 4 5 6

5. Anglers should have more input into management decisions for trout angling on the Avalon Peninsula.

Strongly disagree — Strongly agree

1 2 3 4 5 6

6. I would be in favor of a bag limit reduction for the Avalon Peninsula.

Strongly disagree — Strongly agree

1 2 3 4 5 6

7. How satisfied are you with the current trout regulations for the Avalon Peninsula?

Not Satisfied — Very Satisfied

1 2 3 4 5 6

8. How would you describe the quality of fishing on the Avalon Peninsula?

Poor — Excellent

1 2 3 4 5 6

9. What year were you born? _____

10. What community do you live in? _____

11. Do you currently belong to any conservation or outdoor group?

Yes ☐ No ☐

If so, which one? _____

Please add any other comments or concerns you feel might be of importance in the space provided below.